

**MINOR SOURCE OPERATING PERMIT  
OFFICE OF AIR MANAGEMENT  
AND  
INDIANAPOLIS ENVIRONMENTAL RESOURCES  
MANAGEMENT DIVISION**

**Advance Plating Works, Inc.  
1005 East Sumner Avenue  
Indianapolis, Indiana 46227**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 097-11616-00367	
Issued by: Mona A. Salem Chief Operating Officer Department of Public Works City of Indianapolis	Issuance Date:

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## SECTION A

## SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) and Indianapolis Environmental Resources Management Division (ERMD). The information describing the source contained in conditions A.1 through A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

### A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

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The Permittee owns and operates a stationary decorative chromium plating operation.

Authorized Individual: Gil McKenney  
Source Address: 1005 East Sumner Ave., Indianapolis, Indiana, 46227  
Mailing Address: 1005 East Sumner Ave., Indianapolis, Indiana, 46227  
Phone Number: (317)786-7476  
SIC Code: 3471  
County Location: Marion  
County Status: Attainment for all criteria pollutants  
Source Status: Minor Source Operating Permit  
Minor Source, under PSD or Emission Offset Rules

### A.2 Emissions units and Pollution Control Equipment Summary

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This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) One (1) decorative chromium electroplating operation consisting of: One (1) decorative chromium tank, identified as DC-1, using a hexavalent chromium bath, equipped with a wetting agent as a control;
- (b) One (1) natural gas fueled Black oxide tank heater, maximum heat input rate of 0.25 mmBtu per hour, identified as tank heater #1;
- (c) One (1) natural gas fueled Parts oven, maximum heat input rate of 0.18 mmBtu per hour, identified as parts oven #1;
- (d) One (1) natural gas fueled boiler, maximum heat input rate of 0.28 mmBtu per hour, identified as boiler #1;
- (e) One (1) arc welding/flame cutting station, welding utilizing a maximum of 10 electrodes per hour and flame cutting utilizing oxygen acetylene with a maximum metal thickness of ½ inch and 6-8 inches per minute, with a maximum rod consumption of 5 pounds per year, identified as arc welding/flame cutting station #1;
- (f) One (1) enclosed sandblasting cabinet utilizing glass oxide with an internal nozzle diameter of 1/4 in., with a maximum flow rate of 138 pounds per hour, identified as sandblast #1; and
- (g) One (1) sheet metal stamping operation, maximum throughput of 90 pounds per hour, identified as sheet metal stamping #1.

## **SECTION B                      GENERAL CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

### **B.1      Permit No Defense [IC 13]**

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This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### **B.2      Definitions**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

### **B.3      Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

### **B.4      Modification to Permit [326 IAC 2]**

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All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operating permits pursuant to 326 IAC 2 (Permit Review Rules).

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

- (a) The total source potential to emit of any regulated pollutant is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.
- (b) Any change or modification which may increase potential to emit to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM, OAM and ERMD prior to making the change.

### C.2 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAM, and ERMD upon request and shall be subject to review and approval by IDEM, OAM, and ERMD. IDEM, OAM, and ERMD may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

### C.3 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division  
Air Quality Management Section, Permits  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the ERMD and OAM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.4 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAM, ERMD, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.5 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAM, Permits Branch and ERMD Air Quality, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAM, and ERMD shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

**C.6 Permit Revocation [326 IAC 2-1-9]**

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Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM and ERMD, the fact that continuance of this permit is not consistent with purposes of this article.

**C.7 Opacity [326 IAC 5-1]**

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Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity) monitor in a six (6) hour period.

**Testing Requirements**

**C.8 Performance Testing [326 IAC 3-6]**

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- (a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing methods approved by IDEM, OAM and ERMD.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division  
Air Quality Management Section, Data Compliance  
2700 South Belmont Avenue



Indianapolis, Indiana 46221

at least sixty (60) days before the intended test date for all chromium electroplating facilities and no later than thirty-five (35) days prior to the intended test date for all other facilities. The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two (2) weeks prior to the test date.

- (b) All test reports must be received by IDEM, OAM and ERMD within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAM, and ERMD if the source submits to IDEM, OAM and ERMD, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

### **Compliance Monitoring Requirements**

#### **C.9 Compliance Monitoring [326 IAC 2-1.1-11]**

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

#### **C.10 Monitoring Methods [326 IAC 3]**

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

#### **C.11 Actions Related to Noncompliance Demonstrated by a Stack Test**

- (a) When the results of a stack test performed in conformance with Section C.8 - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAM, and ERMD within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM, OAM and ERMD shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAM and ERMD within thirty (30) days of receipt of the notice of deficiency. IDEM, OAM and ERMD reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAM and ERMD that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAM and ERMD may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

## **Record Keeping and Reporting Requirements**

### **C.12 Malfunctions Report [326 IAC 1-6-2]**

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM), Environmental Resources Management Division (ERMD) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM and ERMD, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

### **C.13 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]**

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- (a) With the exception of performance tests conducted in accordance with Section C.8 - Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM and ERMD may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.
- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered

a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-6.1-2]

- (a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM, OAM, and ERMD representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or ERMD makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or ERMD within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
  - (1) The date, place, and time of sampling or measurements;
  - (2) The dates analyses were performed;
  - (3) The company or entity performing the analyses;
  - (4) The analytic techniques or methods used;
  - (5) The results of such analyses; and
  - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
  - (1) Copies of all reports required by this permit;
  - (2) All original strip chart recordings for continuous monitoring instrumentation;
  - (3) All calibration and maintenance records;
  - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.15 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) To affirm that the source has met all the compliance monitoring requirements stated in this permit the source shall submit a Semi-Annual Compliance Monitoring Report. Any deviation from the requirements and the date(s) of each deviation must be reported. The Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

and

Environmental Resources Management Division  
Air Quality Management Section, Data Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.
- (d) Unless otherwise specified in this permit, any semi-annual report shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) All instances of deviations must be clearly identified in such reports. A reportable deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
- (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
  - (2) A malfunction as described in 326 IAC 1-6-2; or
  - (3) Failure to implement elements of the Preventive Maintenance Plan unless lack of maintenance has caused or contributed to a deviation.
  - (4) Failure to make or record information required by the compliance monitoring provisions of Section D unless such failure exceeds 5% of the required data in any calendar quarter.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred or failure to monitor or record the required compliance monitoring is a deviation.

- (f) Any corrective actions or response steps taken as a result of each deviation must be clearly identified in such reports.
- (g) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.16 Annual Notification [326 IAC 2-6.1-5(a)(5)]

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- (a) Annual notification shall be submitted to the Office of Air Management and ERMD stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Management  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

and  
Environmental Resources Management Division  
Air Quality Management Section, Data Compliance  
2700 South Belmont Avenue  
Indianapolis, Indiana 46221

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAM, and ERMD on or before the date it is due.

## SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

### Facility Description [326 IAC 2-7-5(15)]: Chromium Electroplating Operation

The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.

- (a) One (1) decorative chromium electroplating operation consisting of: One (1) decorative chromium tank, identified as DC-1, using a hexavalent chromium bath, equipped with a wetting agent as a control;

### Emission Limitations and Standards [326 IAC 2-6.1-5(1)]

#### D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR Part 63, Subpart N.

#### D.1.2 Chromium Electroplating NESHAP [326 IAC 20-8-1][40 CFR Part 63, Subpart N]

The provisions of 40 CFR 63, Subpart N - National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks, which are incorporated by reference as 326 IAC 20-8-1, apply to tank DC-1.

#### D.1.3 Chromium Emissions Limitation [40 CFR 63.342(c)] [40 CFR 63.343(a)(1)&(2)]

- (a) The emission limitations in this condition apply only during tank operation, and also apply during periods of startup and shutdown as these are routine occurrences for tanks subject to 326 IAC 20-8-1. The emission limitations do not apply during periods of malfunction.
- (b) During tank operation, the Permittee shall control chromium emissions discharged to the atmosphere from tank DC-1 by:  
  
not allowing the surface tension of the decorative bath contained within the tank to exceed forty-five dynes per centimeter (45 dynes/cm) [equivalent to three and one-tenth times ten raised to the power of negative three pound-force per foot ( $3.1 \times 10^{-3}$  lb<sub>f</sub>/ft)] at any time during operation of tank DC-1 by using a chemical fume suppressant containing a wetting agent.

#### D.1.4 Work Practice Standards [40 CFR 63.342(f)]

The following work practice standards apply to tank DC-1:

- (a) At all times, including periods of startup, shutdown and malfunction, the Permittee shall operate and maintain tank DC-1, wetting agent fume suppressant, and monitoring equipment in a manner consistent with good air pollution control practices, consistent with the Operation and Maintenance Plan (OMP) required by Condition D.1.6.
- (b) Malfunctions shall be corrected as soon as practicable after their occurrence in accordance with the OMP required by Condition D.1.6.
- (c) These operation and maintenance requirements are enforceable independent of emissions limitations or other requirements in this section.

- (d) Determination of whether acceptable operation and maintenance procedures are being used will be based on the information available to IDEM, OAM, and ERMD which may include, but is not limited to, monitoring results; review of the OMP, procedures and records; and inspection of the source.
- (e) Based on the results of the determination made under paragraph (d) of this condition, IDEM, OAM and ERMD may require that the Permittee make changes to the OMP required by Condition D.1.6. Revisions may be required if IDEM, OAM and ERMD finds that the plan:
  - (1) Does not address a malfunction or period of excess emissions that has occurred;
  - (2) Fails to provide for the operation of tank DC-1, wetting fume suppressant, and process monitoring equipment during a malfunction or a period of excess emissions in a manner consistent with good air pollution control practices; or
  - (3) Does not provide adequate procedures for correcting malfunctioning process equipment, air pollution control techniques (wetting agent fume suppressant), or monitoring equipment or other causes of excess emissions as quickly as practicable.

D.1.5 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan (PMP), in accordance with Section C.2 - Preventive Maintenance Plan, of this permit, is required for tank DC-1.

D.1.6 Operation and Maintenance Plan [40 CFR 63.342(f)(3)]

- (a) The Permittee shall prepare an Operation and Maintenance Plan (OMP), in accordance with 40 CFR 63.342(f)(3), shall be prepared and implemented no later than January 25, 1996. The OMP shall specify the operation and maintenance criteria for tank DC-1, wetting agent fume suppressant, and monitoring equipment, and shall include the following elements:
  - (1) Manufacturers recommendations for maintenance of the monitoring equipment used to measure surface tension;
  - (2) A standardized checklist to document the operation and maintenance criteria for tank DC-1, the wetting agent fume suppressant, and the monitoring equipment;
  - (3) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions or periods of excess emissions as indicated by monitoring data do not occur;
  - (4) A systematic procedure for identifying malfunctions of the tanks and periods of excess emissions of tank DC-1, wetting agent fume suppressant, and monitoring equipment; and for implementing corrective actions to address such malfunctions;
- (b) The Permittee may use applicable standard operating procedures (SOP) manuals, Occupational Safety and Health Administration (OSHA) plans, or other existing plans such as the PMP required in Condition D.1.5, as the OMP, provided the alternative plans

meet the above listed criteria in Condition D.1.6(a).

- (c) If the OMP fails to address or inadequately addresses an event that meets the characteristics of a malfunction or period of excess emissions at the time the plan is initially developed, the Permittee shall revise the OMP within forty-five (45) days after such an event occurs. The revised plan shall include procedures for operating and maintaining tank DC-1, the wetting agent, and the monitoring equipment, during similar malfunction or period of excess emissions events, and a program for corrective action for such events.
- (d) If actions taken by the Permittee during periods of malfunction or period of excess emissions are inconsistent with the procedures specified in the OMP, the Permittee shall record the actions taken for that event and shall report by phone such actions within two (2) working days after commencing actions inconsistent with the plan. This report shall be followed by a letter within seven (7) working days after the end of the event, unless the Permittee makes alternative reporting arrangements, in advance, with IDEM, OAM and ERMD.
- (e) The Permittee shall keep the written OMP on record after it is developed to be made available, upon request, by IDEM, OAM and ERMD for the life of tank DC-1 or until the tank is no longer subject to the provisions of 40 CFR 63.340. In addition, if the OMP is revised, the Permittee shall keep previous versions of the OMPs on record to be made available for inspection, upon request by IDEM, OAM and ERMD for a period of five (5) years after each revision to the plan.

#### **Compliance Determination Requirements [326 IAC 2-1.1-11]**

##### **D.1.7 Performance Testing [326 IAC 2-1.1-11]**

- (a) The Permittee is not required to further test tank DC-1 by this permit. However, the IDEM may require testing when necessary to determine if tank DC-1 is in compliance. If testing is required by the IDEM, compliance with the limits specified in Condition D.1.3 shall be determined by a performance test conducted in accordance with 40 CFR 63.344 and Section C.8 Performance Testing.
- (b) Any change, modification, or reconstruction of tank DC-1, the wetting agent fume suppressant, or monitoring equipment may require additional performance testing conducted in accordance with 40 CFR 63.344 and Section C.8 Performance Testing.

##### **D.1.8 Establishing Site-Specific Operating Parameter Values [40 CFR 63.343(c)] [40 CFR 63.344(d)]**

In lieu of establishing the maximum surface tension during a performance test, the Permittee shall accept 45 dynes/cm as the maximum surface tension value that corresponds to compliance with the applicable emission limitation. The Permittee is exempt from conducting a performance test only if the criteria of 40 CFR 63.343(b)(2) are met.

#### **Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]**

##### **D.1.9 Monitoring to Demonstrate Continuous Compliance [326 IAC 2-6.1-5(a)(2)]**

- (a) Pursuant to 40 CFR 63.343(c)(5)(ii) and (iii), when using a wetting agent in the electroplating bath to comply with the limits specified in Condition D.1.3, the Permittee shall monitor the surface tension of the electroplating baths. Operation of tank DC-1 at a surface tension greater than 45 dynes per centimeter shall constitute noncompliance with the standards.



- (1) The Permittee shall monitor the surface tension of the electroplating bath during tank operation according to the following schedule:
    - (A) The surface tension shall be measured once every 4 hours during operation of the tank with a stalagmometer or a tensiometer as specified in Method 306B, appendix A of this part.
    - (B) The time between monitoring can be increased if there have been no exceedances. The surface tension shall be measured once every 4 hours of tank operation for the first 40 hours of tank operation after the compliance date. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once every 8 hours of tank operation. Once there are no exceedances during 40 hours of tank operation, surface tension measurement may be conducted once a day provided there are no more than 40 hours between each measurement on an ongoing basis, until an exceedance occurs. The minimum frequency of monitoring allowed by this subpart is once every 40 hours of tank operation.
    - (C) Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every 4 hours must be resumed. A subsequent decrease in frequency shall follow the schedule laid out in paragraph (B) above. For example, if a Permittee had been monitoring a tank once every 40 hours and an exceedance occurs, subsequent monitoring would take place once every 4 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation, monitoring can occur once every 8 hours of tank operation. Once an exceedance does not occur for 40 hours of tank operation on this schedule, monitoring can occur once a day provided there are no more than 40 hours between each measurement.
  - (2) Once a bath solution is drained from tank DC-1 and a new solution added, the original monitoring schedule of once every 4 hours must be resumed, with a decrease in monitoring frequency allowed following the procedures in paragraphs (B) and (C) above.
- (b) Operating time is defined as that time when a part is in the tank and there is a current running through the tank. If the amount of time that no part is in the tank is fifteen minutes or longer, that time is not considered operating time. Likewise, if the amount of time between placing parts in the tank (i.e., when no part is in the tank) is less than fifteen minutes, that time between plating the two parts may be considered operating time.

#### **Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]**

##### **D.1.10 Record Keeping Requirements [40 CFR 63.345 & 63.347]**

The Permittee shall maintain records to document compliance with Conditions D.1.3, D.1.4 and D.1.6 using the forms provided with this permit. These records shall be maintained in accordance with Section C.14 General Record Keeping Requirements of this permit and include a minimum of the following:

- (a) Inspection records for the wetting agent fume suppressant, and monitoring equipment to document that the inspection and maintenance required by Conditions D.1.7 and D.1.8 have taken place. The record can take the form of a checklist and should identify the following:

The device inspected;

- (1) The date of inspection;
  - (2) A brief description of the working condition of the device during the inspection, including any deficiencies found; and
  - (3) Any actions taken to correct deficiencies found during the inspection, including the date(s) such actions were taken.
- (b) Records of all maintenance performed on tank DC-1 and monitoring equipment.
- (c) Records of the occurrence, duration, and cause (if known) of each malfunction of tank DC-1 and monitoring equipment.
- (d) Records of the occurrence, duration, and cause (if known) of each period of excess emissions of tank DC-1 and monitoring equipment as indicated by monitoring data collected in accordance with this condition.
- (e) Records of actions taken during periods of malfunction or excess emissions when such actions are inconsistent with the OMP.
- (f) Other records, which may take the form of checklists, necessary to demonstrate consistency with the provisions of the OMP.
- (g) Test reports documenting results of all performance tests.
- (h) All measurements as may be necessary to determine the conditions of performance tests, including measurements necessary to determine compliance.
- (i) Records of monitoring data required by 40 CFR 63.343(c) that are used to demonstrate compliance with the standard including the date and time the data are collected.
- (j) The total process operating time, as defined in Condition D.1.8(b), of each tank, during the reporting period.
- (k) Records of the date and time that fume suppressants were added to the electroplating bath, and the amount and type of fume suppressants added.
- (l) All documentation supporting the notifications and reports required by 40 CFR 63.9 and 63.10 (Subpart A, General Provisions) and by Condition D.1.10.

D.1.11 Reporting Requirements [326 IAC 3-6-4(b)] [40 CFR 63.344(a), 63.345 and 63.347]

The notifications and reports required in this section shall be submitted to IDEM, OAM using the address specified in Section C.15 General Reporting Requirements.

(a) Notifications:

(1) Initial Notifications

The Permittee shall notify IDEM, OAM and ERMD in writing that the source is subject to 40 CFR Part 63, Subpart N. The notification shall be submitted no later than one hundred eighty (180) days after the compliance date and shall contain the information listed in 40 CFR 63.347(c)(1).

(2) A Notification of Compliance Status (NCS) is required each time that the facility becomes subject to the requirements of 40 CFR Part 63 Subpart N.

(A) The NCS shall be submitted to IDEM, OAM and ERMD, and shall list, for each tank, the information identified in 40 CFR 63.347(e)(2).

(B) The NCS for tank DC-1 shall be submitted to IDEM, OAM and ERMD immediately.

(3) Notification of Construction or Reconstruction

Pursuant to 40 CFR 63.345(b)(1), the Permittee may not construct a new tank subject to 40 CFR 63, Subpart N (including non-affected tanks defined in 40 CFR 63.344(e)) without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM and ERMD. In addition, the Permittee may not change, modify, or reconstruct tank DC-1 without submitting a Notification of Construction or Reconstruction (NCR) to IDEM, OAM and ERMD.

(A) The NCR shall contain the information identified in 40 CFR 63.345(b)(2) and (3).

(B) A change, modification, or reconstruction of this facility includes any change in the air pollution control techniques, the addition of add-on control devices, or the construction of duct work for the purpose of controlling both existing tanks and non-affected facilities by a common control technique or device.

(C) A complete application to construct new chromium electroplating or chromium anodizing tanks serves as this notification. Likewise, the complete application to modify or reconstruct tank DC-1 serves as this notification.

(D) Pursuant to 326 IAC 2-1.1-2(a), permission must be received from IDEM, OAM and ERMD before construction, modification, or reconstruction may commence.

(b) Performance Test Results

The Permittee shall document results from any future performance tests in a complete test report that contains the information required in 40 CFR 344(a).

The Permittee shall submit reports of performance test results as part of the Notification of Compliance Status, described in 40 CFR 63.347(e), no later than forty-five (45) days following the completion of the performance test.

(a) Ongoing Compliance Status Report

The Permittee shall prepare summary reports to document the ongoing compliance status of tank DC-1 using the Ongoing Compliance Status Report form provided with this permit. This report shall contain the information specified in 40 CFR 63.347(g)(3).

Because tank DC-1 is located at site that is an area source of hazardous air pollutants (HAPs), the Ongoing Compliance Status Report shall be retained on site and made available to IDEM, OAM and ERMD upon request.

- (1) The Ongoing Compliance Status Report shall be completed according to the following schedule except as provided in paragraphs (c)(2).
  - (A) The first report shall cover the period from the start-up date of the emissions units to December 31 of the year in which the emissions units begin operation.
  - (B) Following the first year of reporting, the report shall be completed on a calendar year basis with the reporting period covering from January 1 to December 31.
- (2) If either of the following conditions are met, semiannual reports shall be prepared and submitted to IDEM, OAM and ERMD:
  - (A) The total duration of excess emissions (as indicated by the monitoring data collected by the Permittee in accordance with 40 CFR 63.343(c)) is one percent (1%) or greater of the total operating time as defined in Condition D.1.8(b) for the reporting period; or
  - (B) The total duration of malfunctions of the add-on air pollution control device and monitoring equipment is five percent (5%) or greater of the total operating time as defined in Condition D.1.8(b).

Once the Permittee reports an exceedance as defined above, Ongoing Compliance Status Reports shall be submitted semiannually until a request to reduce reporting frequency in accordance with 40 CFR 63.347(g)(2) is approved.

- (3) IDEM, OAM and ERMD may determine on a case-by-case basis that the summary report shall be completed more frequently and submitted, or that the annual report shall be submitted instead of being retained on site, if these measures are necessary to accurately assess the compliance status of the source.

## SECTION D.2

## EMISSIONS UNIT OPERATION CONDITION

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (b) One (1) natural gas fueled Black oxide tank heater, maximum heat input rate of 0.25 mmBtu per hour, identified as tank heater #1;
- (c) One (1) natural gas fueled Parts oven, maximum heat input rate of 0.18 mmBtu per hour parts oven #1;
- (d) One (1) natural gas fueled boiler, maximum heat input rate of 0.28 mmBtu per hour, identified as boiler #1;

### Emission Limitations and Standards

#### D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

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Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the 0.28 MMBtu per hour heat input for boiler #1 shall be limited to 0.6 pounds per MMBtu heat input.

### Compliance Determination Requirements

#### D.2.2 Testing Requirements [326 IAC 2-1.1-11]

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The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or ERMD, compliance with the particulate limit specified in Condition D.2.1 shall be determined by a performance test conducted in accordance with Section C.8 Performance Testing.

### SECTION D.3

### EMISSIONS UNIT OPERATION CONDITIONS

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

- (e) One (1) arc welding/flame cutting station, welding utilizing a maximum of 10 electrodes per hour and flame cutting utilizing oxygen acetylene with a maximum metal thickness of ½ inch and 6-8 inches per minute, with a maximum rod consumption of 5 pounds per year, identified as arc welding/flame cutting station #1;
- (f) One (1) enclosed sandblasting cabinet utilizing glass oxide with an internal nozzle diameter of 1/4 in., with a maximum flow rate of 138 pounds per hour, identified as sandblast #1; and
- (g) One (1) sheet metal stamping operation, maximum throughput of 90 pounds per hour, identified as sheet metal stamping #1.

#### Emission Limitations and Standards

##### D.3.1 Particulate Matter (PM) [326 IAC 6-3-2(c)]

The PM from sandblast #1 and sheet metal stamping operation #1 shall not exceed the 0.96 pounds per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

##### D.3.2 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM and ERMD may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or ERMD, compliance with the particulate limit specified in Condition D.3.1 shall be determined by a performance test conducted in accordance with Section C.8 - Performance Testing.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION**

**MINOR SOURCE OPERATING PERMIT  
CHROMIUM ELECTROPLATING NESHAP  
ONGOING COMPLIANCE STATUS REPORT**

Source Name: Advanced Plating Works, Inc.  
Source Address: 1005 Sumner Ave., Indpls., IN  
Mailing Address: 1005 Sumner Ave., Indpls., IN  
Minor Source Operating Permit No.: 097-11616-00367

Tank ID #: DC-1  
Type of process: Decorative  
Monitoring Parameter: Surface tension of the electroplating bath  
Parameter Value: 45 dynes per centimeter  
Limits: Total chromium concentration may not exceed 0.01 mg/dscm

This form is to be used to report compliance for the Chromium Electroplating NESHAP only.  
The frequency for completing this report may be altered by the IDEM, OAM, Compliance Branch or the ERMD.

Companies classified as an area source: complete this report no later than 30 days after the end of the reporting period,  
and retain on site unless otherwise notified.

BEGINNING AND ENDING DATES OF THE REPORTING PERIOD:			
TOTAL OPERATING TIME OF THE TANK DURING THE REPORTING PERIOD:			
<b>MAJOR AND AREA SOURCES: CHECK ONE</b>			
<b>9</b> NO DEVIATIONS OF THE MONITORING PARAMETER ASSOCIATED WITH THIS TANK FROM THE COMPLIANT VALUE OR RANGE OF VALUES OCCURRED DURING THIS REPORTING PERIOD.			
<b>9</b> THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES DURING THIS REPORTING PERIOD (THUS INDICATING THE EMISSION LIMITATION MAY HAVE BEEN EXCEEDED, WHICH COULD RESULT IN MORE FREQUENT REPORTING).			
<b>AREA (I.E., NON-MAJOR) SOURCES OF HAP ONLY:</b> IF DEVIATIONS OCCURRED, LIST THE AMOUNT OF TANK OPERATING TIME EACH MONTH THAT MONITORING RECORDS SHOW THE MONITORING PARAMETER DEVIATED FROM THE COMPLIANT VALUE OR RANGE OF VALUES.			
JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC
<b>HARD CHROME TANKS / MAXIMUM RECTIFIER CAPACITY LIMITED IN ACCORDANCE WITH 40 CFR 63.342(c)(2) ONLY:</b> LIST THE ACTUAL AMPERE-HOURS CONSUMED (BASED ON AN AMP-HR METER) BY THE INDIVIDUAL TANK.			
JAN	APR	JUL	OCT
FEB	MAY	AUG	NOV
MAR	JUN	SEP	DEC

**CHROMIUM ELECTROPLATING NESHAP**

## ONGOING COMPLIANCE STATUS REPORT

ATTACH A SEPARATE PAGE IF NEEDED

Page 2 of 2

IF THE OPERATION AND MAINTENANCE PLAN REQUIRED BY 40 CFR 63.342 (f)(3) WAS NOT FOLLOWED, PROVIDE AN EXPLANATION OF THE REASONS FOR NOT FOLLOWING THE PLAN AND DESCRIBE THE ACTIONS TAKEN FOR THAT EVENT:

DESCRIBE ANY CHANGES IN TANKS, RECTIFIERS, CONTROL DEVICES, MONITORING, ETC. SINCE THE LAST STATUS REPORT:

ADDITIONAL COMMENTS:

### ALL SOURCES: CHECK ONE

- 9** I CERTIFY THAT THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE; AND, THAT THE INFORMATION CONTAINED IN THIS REPORT IS ACCURATE AND TRUE TO THE BEST OF MY KNOWLEDGE.
- 9** THE WORK PRACTICE STANDARDS IN 40 CFR 63.342(f) WERE NOT FOLLOWED IN ACCORDANCE WITH THE OPERATION AND MAINTENANCE PLAN ON FILE, AS EXPLAINED ABOVE AND/OR ON ATTACHED.

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Phone: \_\_\_\_\_

Attach a signed certification to complete this report.



**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
and  
ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION  
AIR QUALITY SECTION**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under  
326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>Advance Plating Works, Inc.</b>
<b>Address:</b>	<b>1005 East Sumner Avenue</b>
<b>City:</b>	<b>Indianapolis, Indiana 46227</b>
<b>Phone #:</b>	<b>(317) 786-7476</b>
<b>MSOP #:</b>	<b>097-11616-00367</b>

I hereby certify that Advance Plating Works, Inc. is **9** still in operation.  
**9** no longer in operation.

I hereby certify that Advance Plating Works, Inc. is **9** in compliance with the requirements of MSOP 097-11616-00367.

**9** not in compliance with the requirements of MSOP 097-11616-00367.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967**

Rev 3/99

**Please note - This form should only be used to report malfunctions  
applicable to Rule 326 IAC 1-6 and to qualify for  
the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
COMPLIANCE DATA SECTION  
and  
INDIANAPOLIS ENVIRONMENTAL RESOURCES MANAGEMENT DIVISION  
AIR QUALITY MANAGEMENT SECTION  
DATA COMPLIANCE**

**MINOR SOURCE OPERATING PERMIT  
SEMI-ANNUAL COMPLIANCE MONITORING REPORT**

Source Name: Advance Plating Works, Inc.  
Source Address: 1005 East Sumner Ave., Indpls., IN 46227  
Mailing Address: 1005 East Sumner Ave., Indpls., IN 46227  
MSOP No.: 097-11616-00367

**Months:** \_\_\_\_\_ **to** \_\_\_\_\_ **Year:** \_\_\_\_\_

This report is an affirmation that the source has met all the compliance monitoring requirements stated in this permit. This report shall be submitted semi-annually. Any deviation from the compliance monitoring requirements and the date(s) of each deviation must be reported. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

**9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

**9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD.**

<b>Compliance Monitoring Requirement</b> (e.g. Permit Condition D.1.3)	<b>Number of Deviations</b>	<b>Date of each Deviation</b>

Form Completed By: \_\_\_\_\_  
Title/Position: \_\_\_\_\_  
Date: \_\_\_\_\_  
Phone: \_\_\_\_\_

Attach a signed certification to complete this report.

**Indiana Department of Environmental Management  
Office of Air Management  
and  
Environmental Resources Management Division**

Technical Support Document (TSD) for a Minor Source Operating Permit

**Source Background and Description**

**Source Name:** Advance Plating Works, Inc.  
**Source Location:** 1005 East Sumner, Indianapolis, Indiana 46227  
**County:** Marion  
**SIC Code:** 3471  
**Operation Permit No.:** 097-11616-00367  
**Permit Reviewer:** Lisa Adler

The City of Indianapolis Environmental Resource Management Division (ERMD) and the Office of Air Management (OAM) has reviewed an application from Advance Plating Works, Inc. relating to the operation of a decorative chromium plating process.

**Emission Units and Pollution Control Equipment**

The source consists of the following emission units and pollution control devices:

- (a) One (1) decorative chromium electroplating operation consisting of: One (1) decorative chromium tank, identified as DC-1, using a hexavalent chromium bath, equipped with a wetting agents as a control;
- (b) One (1) natural gas fueled Black oxide tank heater, maximum heat input rate of 0.25 mmBtu per hour, identified as tank heater #1;
- (c) One (1) natural gas fueled Parts oven, maximum heat input rate of 0.18 mmBtu per hour, identified as parts oven #1;
- (d) One (1) natural gas fueled boiler, maximum heat input rate of 0.28 mmBtu per hour, identified as boiler #1;
- (e) One (1) arc welding/flame cutting station, welding utilizing a maximum of 10 electrodes per hour and flame cutting utilizing oxygen acetylene with a maximum metal thickness of ½ inch and 6-8 inches per minute, with a maximum rod consumption of 5 pounds per year, identified as arc welding/flame cutting station #1;
- (f) One (1) enclosed sandblasting cabinet utilizing glass oxide with an internal nozzle diameter of 1/4 in., with a maximum flow rate of 138 pounds per hour, identified as sandblast #1; and
- (g) One (1) sheet metal stamping operation, maximum throughput of 90 pounds per hour, identified as sheet metal stamping #1.

**Permitted Emission Units and Pollution Control Equipment**

There are no permitted facilities operating at this source during this review process.

### Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
N/A	N/A	N/A	N/A	N/A	N/A

### Enforcement Issue

There are no enforcement actions pending.

### Recommendation

The staff recommends to the Administrator that the operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 9, 1999, with additional information received on January 20, 2000.

### Emission Calculations

See Appendix A of this document for detailed emissions calculations.

### Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	6.04
PM-10	0.0
SO <sub>2</sub>	0.0
VOC	0.0
CO	0.1
NO <sub>x</sub>	0.3

HAP's	Potential To Emit (tons/year)
Chromium	N/A

- (a) This source is a decorative chromium electroplating operation that uses a hexavalent chromium bath; therefore, pursuant to 326 IAC 2-5.1-3, a minor source operating permit will be issued.

## Actual Emissions

No previous emission data has been received from the source.

## County Attainment Status

The source is located in Marion County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Marion County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Marion County has been classified as attainment or unclassifiable for PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub> and CO. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2, 40 CFR 52.21, or 326 IAC 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

## Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	6.04
PM <sub>10</sub>	0.0
SO <sub>2</sub>	0.0
VOC	0.0
CO	0.1
NO <sub>x</sub>	0.3
Chromium	N/A

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

## Part 70 Permit Determination

### 326 IAC 2-7 (Part 70 Permit Program)

This source is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons/year.

This is the first air approval issued to this source.

## Federal Rule Applicability

- (a) Boiler #1 is not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60.40c, Subpart Dc), due to the combustion units capacity being less than 10 mmBtu/hr.
- (b) Tank DC-1 is subject to the National Emission Standards for Hazardous Air Pollutants, (40 CFR 63, Subpart N, and 326 IAC 20). Pursuant to 40 CFR 63, Subpart N, and 326 IAC 20-1-1, the chromium electroplating operations are subject to the following conditions:
  - (1) Emission Limitation
    - (A) The surface tension of the chromium electroplating bath contained with the tank shall not exceed forty-five (45) dynes per centimeter at any time during the operation of the tank if a chemical fume suppressant containing a wetting agent is used to demonstrate compliance.
    - (B) Each time that surface tension monitoring exceeds forty-five (45) dynes per centimeter, the frequency of monitoring must revert back to every four (4) hours of tank operation. After forty (40) hours of monitoring tank operation every four (4) hours with no exceedances, surface tension measurement may be conducted once every eight (8) hours of tank operation. Once there have been no exceedances during forty (40) hours of tank operation, surface tension measurement may be conducted once every forty (40) hours of tank operation on an ongoing basis, until an exceedance occurs.
    - (C) An alternative emission limit of 0.01 milligram per day standard cubic meter (mg/dscm) will be applicable if the chromium electroplating bath does not meet the limit above.
  - (2) Monitoring Requirements
    - (A) The Permittee shall monitor the surface tension of the electroplating baths in the tanks in DC-1. Operation of either tank at a surface tension of greater than 45 dynes per centimeter shall constitute noncompliance with the standards. The surface tension of each tank in operation shall be monitored according to the following schedule:
      - (i) The surface tension shall be measured once every four (4) hours for the first forty (40) hours of operating time with a stalagmometer or a tensiometer as specified in 40 CFR 63, Appendix A, Method 306B (Surface Tension Measurement and Record Keeping for Chromium Plating Tanks Used at Electroplating and Anodizing Facilities). If a tensiometer is used



to measure surface tension, the instructions given in ASTM Method D 1331-89, "Standard Test Methods for Surface and Interfacial Tension of Solutions of Surface Active Agents," must be followed.

- (ii) The time between monitoring can be increased if there have been no exceedances. Once there are no exceedances in forty (40) hours of operating time, the surface tension measurement may be conducted once every eight (8) hours of operating time. Once there are no exceedances during forty (40) hours of operating time, surface tension measurement may be conducted once every forty (40) hours of operating time on an ongoing basis or on an alternative monitoring schedule approved by IDEM, OAM and ERMD until an exceedance occurs.

The source agrees to conduct surface tension measurements, at a minimum, once each day of operation provided there are no more than forty (40) hours of operating time between successive surface tension measurements.

- (B) Once an exceedance occurs through tank surface tension measurement, wetting agent shall be added and the original monitoring schedule of once every four (4) hours must be resumed. A subsequent decrease in frequency of monitoring surface tension is allowed as stated in Condition D.1.6(b) above.
- (C) Once a tank or bath solution is drained and a new solution is added, the original surface tension monitoring schedule of once every four (4) hours must be resumed with a subsequent decrease in monitoring frequency allowed as stated in Condition D.1.6(b) above.
- (D) Operating time for chromium electroplating is that time when the rectifier is turned on and a part is in the tank. When there is no part in a tank for fifteen (15) or more minutes, that time will not be considered operating time; likewise, if the time between placing a part in the tank is less than fifteen (15) minutes, that time will be considered part of the operating time.

(3) Reporting Requirements

- a. A summary report shall be prepared to document the ongoing compliance status of the chromium electroplating operation. This report shall be completed annually, retained on site, and made available to IDEM and ERMD upon request. If there are significant exceedance of chromium air emission limits (as defined in 40 CFR Part 63.347(h)(2)), then semiannual reports shall be submitted to:

Indiana Department of Environmental Management  
Air Compliance Branch, Office of Air Management  
Chromium Electroplating  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206

and

Environmental Resources Management Division  
Air Quality Management Section, Data Compliance  
2700 South Belmont Avenue

Indianapolis, Indiana 46221

- (B) The chromium electroplating operations shall be subject to the record keeping and reporting requirement as indicated in the chromium electroplating NESHAP.
- (c) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63 Subpart N.

#### **State Rule Applicability - Entire Source**

##### **326 IAC 2-6 (Emission Reporting)**

This source is located in Marion County and the potential to emit VOC and NO<sub>x</sub>, is less than ten (10) tons per year. Therefore, 326 IAC 2-6 does not apply.

##### **326 IAC 5-1 (Visible Emissions Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of thirty percent (30%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-2(2).
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

#### **State Rule Applicability - Individual Facilities**

##### **326 IAC 1-6-3 (Preventive Maintenance Plan)**

A Preventive Maintenance Plan (PMP) is required for the tank DC-1.

##### **326 IAC 2-4-1 (Major Sources of Hazardous Air Pollutants)**

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Clean Air Act Amendments. Therefore 326 IAC 2-4.1 is not applicable..

##### **326 IAC 6-2-4 Particulate Matter Limitation (PM)**

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating, the PM emissions from the 0.28 MMBtu per hour heat input for boiler #1 shall be limited to 0.6 pounds per MMBtu heat input.

##### **326 IAC 6-3-2(c) Particulate Matter (PM)**

The PM from sandblast #1 and sheet metal stamping operation #1 shall not exceed the 0.96

pounds per hour emission rate established as E in the following formula:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and  
P = process weight rate in tons per hour

#### 326 IAC 20 (HAPs: Incorporation of Federal Regulations)

Pursuant to 326 IAC 20 the Federal regulations for Hazardous Air Pollutants, 40 CFR 63, Subpart A, are incorporated by reference.

#### **Conclusion**

The operation of this decorative chrome plating process shall be subject to the conditions of the attached proposed Minor Source Operating Permit 097-11616-00367.

# Appendix A: Emission Calculations

Page 1 of 2 TSD App A

## Abrasive Blasting

Company Name: Advance Plating Works, Inc.  
Address City IN Zip: 1005 East Sumner, Indianapolis, Indiana 46227  
MSOP: 97-11616-00367  
Pit ID: 00367  
Reviewer: LMA  
Date: 05/08/00

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

## Calculations

### Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)  
FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =  
D = Density of abrasive (lb/ft3) From Table 2 =  
D1 = Density of sand (lb/ft3) =  
ID = Actual nozzle internal diameter (in) =  
ID1 = Nozzle internal diameter (in) from Table 3 =

138
99
99
0.25
0.25

Flow Rate (FR) (lb/hr) = 138.000 per nozzle

### Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =  
FR = Flow Rate (lb/hr) =  
w = fraction of time of wet blasting =  
N = number of nozzles =

0.010
138.000
0 %
1

Uncontrolled Emissions =	1.38 lb/hr
	6.04 ton/yr

## METHODOLOGY

Emission Factors from Stappa Alapco, Section 3 "Abrasive Blasting"  
Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs  
Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)  
E = EF x FR x (1-w/200) x N  
w should be entered in as a whole number (if w is 50%, enter 50)

Abrasive.wk4 9/95

Combination of all  
combustion units fueled by  
natural gas

**Appendix A: Emission Calculations**  
**Natural Gas Combustion Only**  
**MM Btu/hr 0.3 - < 10**

Page 2 of 2 TSD App A

**Company Name:** Advance Plating Works, Inc.  
**Address City IN Zip:** 1005 East Sumner Avenue, Indianapolis, Indiana 46227  
**Registration:** 097-11616-00367  
**Reviewer:** LMA  
**Date:** 1/20/99

Heat Input Capacity  
MMBtu/hr

Potential Throughput  
MMCF/yr

0.7

6.2

Emission Factor in lb/MMCF	Pollutant					
	PM 13.7	PM10 13.7	SO2 0.6	NOx 100.0	VOC 5.3	CO 21.0
Potential Emission in tons/yr	0.0	0.0	0.0	0.3	0.0	0.1

**Methodology**

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

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